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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,443	10/31/2006	Steven Brian Gendreau	EX03-098C-US	8809

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EXAMINER	
DUFFY, BRADLEY	
ART UNIT	**PAPER NUMBER**
1643	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,443	GENDREAU ET AL.	
	Examiner	Art Unit	
	Brad Duffy	1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2006*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-25* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Exhibit A*.

DETAILED ACTION

1. Claims 1-25 are pending in this application and are currently subject to restriction.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim 6, insofar as the claim is drawn to a method for identifying a candidate AXIN pathway modulating agent comprising an apoptosis assay.

Group II, claim 6, insofar as the claim is drawn to a method for identifying a candidate AXIN pathway modulating agent comprising a cell proliferation assay.

Group III, claim 6, insofar as the claim is drawn to a method for identifying a candidate AXIN pathway modulating agent comprising an angiogenesis assay.

Group IV, claim 6, insofar as the claim is drawn to a method for identifying a candidate AXIN pathway modulating agent comprising a hypoxic induction assay.

Group V, claims 13-15 and 20-22, insofar as the claims are drawn to a method for modulating an AXIN pathway of a cell comprising contacting a cell with an antibody that specifically binds to a FLJ10607 polypeptide.

Group VI, claims 13-15 and 20-22, insofar as the claims are drawn to a method for modulating an AXIN pathway of a cell comprising contacting a cell with a small molecule that specifically binds to a FLJ10607 polypeptide.

Group VII, claim 20-22, insofar as the claims are drawn to a method of modulating an AXIN pathway a cell comprising contacting a cell with a nucleic acid modulator that specifically binds to a FLJ10607 nucleic acid.

Group VIII, claim 23-25, insofar as the claims are drawn to a method for determining the likelihood of disease comprising determining the expression of a gene encoding FLJ10607.

3. Claims 1-5, 7-12, and 16-19 are linking claims, linking the inventions of Groups I-IV. The restriction requirement among the linked inventions is subject to the nonallowance of the linking claim(s). Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

4. The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

To have a general inventive concept under PCT Rule 13.1, the inventions need to be linked by a special technical feature. The technical feature of the process that is the invention of claim 1 is (a) providing an assay system comprising a FLJ10607

polypeptide or nucleic acid; (b) contacting the assay system with a test agent under conditions whereby, but for the presence of the test agent, the system provides a reference activity; and (c) detecting a test agent-biased activity of the assay system, wherein a difference between the test agent-biased activity and the reference activity identifies the test agent as a candidate AXIN pathway modulating agent. This claim lacks inventive step over Mio et al (JBC, 274(1):434-429, 1999). Mio et al teach an assay system comprising a polypeptide designated GNA1[1] to monitor the acetyltransferase activity of the GNA1 polypeptide, wherein the assay system is contacted with a Ac-CoA test agent and a increase in the acetyltransferase activity of the system is detected in the presence of Ac-CoA compared to its reference activity (see entire document, e.g., page 427, right column and Fig 5). Therefore, since Mio et al teach a difference between the test agent-biased activity and the reference activity in this assay system, Ac-CoA is inherently identified as candidate AXIN pathway modulating agent. Since Mio et al teach the technical feature recited in claim 1, it is not a special technical feature and the groups do not relate to a single general inventive concept as required under PCT Rule 13.1.

For these reasons, the special technical feature of the invention of Group I is identifying a candidate AXIN pathway modulating agent comprising an apoptosis assay.

The special technical feature of the invention of Group II is identifying a candidate AXIN pathway modulating agent comprising a cell proliferation assay.

The special technical feature of the invention of Group III is identifying a candidate AXIN pathway modulating agent comprising an angiogenesis assay.

The special technical feature of the invention of Group IV is identifying a candidate AXIN pathway modulating agent comprising a hypoxic induction assay.

The special technical feature of the invention of Group V is modulating an AXIN pathway of a cell comprising contacting a cell with an antibody that specifically binds to a FLJ10607 polypeptide.

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[1] GNA1 is a synonym for FLJ10607, as evidenced by the iHOP database available at www.ihop-net.org attached as Exhibit A

The special technical feature of the invention of Group VI is modulating an AXIN pathway of a cell comprising contacting a cell with a small molecule that specifically binds to a FLJ10607 polypeptide.

The special technical feature of the invention of Group VII is modulating an AXIN pathway a cell comprising contacting a cell with a nucleic acid modulator that specifically binds to a FLJ10607 nucleic acid.

The special technical feature of the invention of Group VIII is determining the likelihood of disease comprising determining the expression of a gene encoding FLJ10607.

Accordingly the groups are not so linked as to form a single general concept under PCT Rule 13.1.

5. **Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined** even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.** The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.

103(a) of the other invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad Duffy whose telephone number is (571) 272-9935. The examiner can normally be reached at Monday through Friday from 7:00 AM to 4:30 PM, with alternate Fridays off. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms, can be reached at (571) 272-0832. The official fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully,
Brad Duffy
571-272-9935

/Stephen L. Rawlings/
Stephen L. Rawlings, Ph.D.
Primary Examiner, Art Unit 1643

bd
September 6, 2007

Exhibit A

Symbol	Name	Synonyms	Or
GNPNAT1	glucosamine-phosphate N-acetyltransferase 1	FLJ10607, Glucosamine 6-phosphate N-acetyltransferase, GNA1, GNPNAT, Gpnat1, Phosphoglucosamine acetylase, Phosphoglucosamine transacetylase	Ho

UniProt	Q96EK6
NCBI Gene	64841
NCBI RefSeq	NP_932332
NCBI RefSeq	NM_198066
NCBI UniGene	64841
NCBI Accession	CR617215, AK025575

Homologues of GNPNAT1 ...

Most recent information for GNPNAT1 ... new

Enhanced PubMed/Google query ...

Inactivation of Gna1 had a pleiotropic effect on phenotype. [2004]

Gna1, a gene encoding a Galpha subunit, a key component of signal transduction pathways, has been cloned a characterized in the wheat pathogen Stagonospora nodorum. [2004]

The aberrant root morphology of the gna1 mutant includes shortening of roots, disruption of microtubules, and s of cells in the root elongation zone. [2005]

Gna1 is the first signal transduction gene to be cloned and characterized from S. nodorum and its inactivation h uncovered several previously unknown facets of pathogenicity. [2004]

Analysis of growth medium identified tyrosine, phenylalanine, and dihydroxyphenylalanine (L-DOPA) were ex the Gna1 strains but not by wild type. [2004]

Measurements of pertussis toxin-catalyzed ADP-ribosylation and Western analysis showed that the GNA-1, Gal Galphao and Galphas proteins were present in the respective transformed strains. [2000]

The cDNA sequence revealed a 1059 bp open reading frame encoding a 353 amino acid Galphai subunit of 41 I than 90% identical to the CPG-1 of Cryphonectria parasitica, and GNA-1 [?] of Neurospora crassa. [2000]

Glucosamine-6-phosphate N-acetyltransferase from human liver, which catalyzes the transfer of an acetyl gr acetyl coenzyme A (AcCoA) to the primary amine of D-glucosamine 6-phosphate to form N-acetyl-D-glucosa phosphate, was expressed in a soluble form from Escherichia coli strain BL21 (DE3). [2006]